

## **Earth-moving machinery - Guards - Definitions and requirements**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN ISO 3457:2004 sisaldab Euroopa standardi EN ISO 3457:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 23.11.2004 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN ISO 3457:2004 consists of the English text of the European standard EN ISO 3457:2003.</p> <p>This document is endorsed on 23.11.2004 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This International Standard defines principal terms and specifies requirements for, and characteristics of, guards and other means of protecting personnel from mechanical, fluid or thermal hazards associated with the operation and routine maintenance of earth-moving machinery as defined in ISO 6165, when used as intended by the manufacturer.</p>	<p><b>Scope:</b></p> <p>This International Standard defines principal terms and specifies requirements for, and characteristics of, guards and other means of protecting personnel from mechanical, fluid or thermal hazards associated with the operation and routine maintenance of earth-moving machinery as defined in ISO 6165, when used as intended by the manufacturer.</p>
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**Võtmesõnad:**

**English version**

**Earth-moving machinery – Guards**

Definitions and requirements

(ISO 3457 : 2003)

Engins de terrassement – Protec-  
teurs – Définitions et exigences  
(ISO 3457 : 2003)

Erdbaumaschinen – Schutzeinrich-  
tungen – Begriffe und Anforderungen  
(ISO 3457 : 2003)

This European Standard was approved by CEN on 2003-04-24.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Management Centre: rue de Stassart 36, B-1050 Brussels**

## Foreword

International Standard

ISO 3457 : 2003 Earth-moving machinery – Guards – Definitions and requirements, which was prepared by ISO/TC 127 'Earth-moving machinery' of the International Organization for Standardization, has been adopted by Technical Committee CEN/TC 151 'Construction equipment and building material machines – Safety', the Secretariat of which is held by DIN, as a European Standard.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the relevant EU Directive.

For relationship with this directive, see Annex ZA.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, and conflicting national standards withdrawn, by November 2003 at the latest.

In accordance with the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard:

Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, the Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland, and the United Kingdom.

## Endorsement notice

The text of the International Standard ISO 3457 : 2003 was approved by CEN as a European Standard without any modification.

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## Introduction

This International Standard provides performance requirements for guards and other means of protecting personnel from unintentional contact with common mechanical, fluid or thermal hazards on earthmoving machinery during normal machine operation and routine maintenance. Relationships between the distance separating a guard from a hazardous component and the guard opening size based on anthropometric data are included.

Some factors having a significant effect upon personnel protection, such as operator and service personnel training, experience and careful practice, are outside the scope of this International Standard.

Deviations from these requirements to allow technological advances in machine systems and designs are permissible. In complying with this International Standard, the following three safety principles are to be considered, in the order given, based on feasibility:

- eliminate potential hazards by machine design;
- guard against contact with sources of potential safety hazards if elimination by design is not feasible;
- warn of potential safety hazards where neither a) nor b) is feasible.

## 1 Scope

This International Standard defines principal terms and specifies requirements for, and characteristics of, guards and other means of protecting personnel from mechanical, fluid or thermal hazards associated with the operation and routine maintenance of earth-moving machinery as defined in ISO 6165, when used as intended by the manufacturer.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2867, *Earth-moving machinery — Access systems*

ISO 3411, *Earth-moving machinery — Human physical dimensions of operators and minimum operator space envelope*

ISO 6165, *Earth-moving machinery — Basic types — Vocabulary*

ISO 6682, *Earth-moving machinery — Zones of comfort and reach for controls*

ISO 9244, *Earth-moving machinery — Safety signs and hazard pictorials — General principles*

ISO 12508, *Earth-moving machinery — Operator station and maintenance areas — Bluntness of edges*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

### 3.1

#### **guard**

protective device, alone or combined with other parts of the machine, designed and fitted to minimize the possibility of contact with a potentially hazardous machine component

#### 3.1.1

##### **barrier guard**

guard that restricts the movement of a person's body or a part of it, in order to avoid its contact with a machine component or exposure to other, similar hazards

EXAMPLE Rail, frame, cover or enclosure.